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EXPLANATION OF THE PLATES.

PLATE LII.

Capra pyrenaica hispanica.—Adult male from the Sierra Nevada, in summer coat. Madrid Museum of Natural Science.

PLATE LIII.

Capra pyrenaica victoriae.—Old male (type) from Madrigal de la Vera, and adult female from Bohoyo, both in summer coat. Madrid Museum of Natural Science.

PLATE LIV.

Capra pyrenaica victoriae.—Old male from Bohoyo, in winter coat. Madrid Museum of Natural Science.

44. On Antelopes of the Genera *Madoqua* and *Rhynchotragus* found in Somaliland. By R. E. DRAKE-BROCKMAN, M.R.C.S., L.R.C.P., F.Z.S.

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(Plates LV. & LVI.*)

THE DIK-DIKS.

The Somali country might justly be termed the home of the Dik-diks, for not only are most of the known species found there but all the remainder at present known, save *Madoqua dama-rensensis*, are to be found in the adjoining territories.

These little Antelopes, affording but poor sport for the big-game hunter, have been quite overlooked by the sportsman until the last fifteen years or so.

Dik-diks are invariably found in what might be termed the acacia bush country, dry and arid regions where the trees seldom grow beyond the height of bushes, and where there is sufficient thick undergrowth to afford them protection, while at the same time it permits of their running about freely between the bushes and plants. In the dense aloe and sansevieria patches so frequently met with in these parched regions, Dik-diks will nearly always be plentiful, owing to the excellent shelter they afford for these diminutive creatures.

Most of the small plants and bushes supply them with food, but the various varieties of stunted acacias are undoubtedly their favourites. Personally I cannot recall having met with Dik-diks in any place where these stunted acacias were not to be found.

* For explanation of the Plates see page 984.

It has been doubted whether they can exist without water; Swayne says, talking of all the Dik-diks, that they "like to be near water, going to drink at midday and just after nightfall," whereas the Somalis maintain that if a Dik-dik drinks water it will die.

In the Badminton Library, vol. i., 'Big Game Shooting in East Africa,' Mr. F. J. Jackson wrote concerning the Paa, the local name for *M. kirkee*, "it is therefore quite evident that the juices of the vegetation on which it feeds and the dews at night are sufficient for its requirements."

My own experience is in entire agreement with the last-mentioned authority, although I am not prepared to say that Dik-diks never drink.

Those who may have observed them closely will have noticed how a single pair will, even though disturbed, be found day after day in much the same spot, perhaps a square acre in extent, miles from the nearest water; here they will live all their lives if unmolested. It is surprising to see how, after shooting the female, the male will cling to his old haunts, living quite alone for months together.

On one occasion I shot the female of a pair which used to live in a small acacia grove where I frequently went to get a Francolin for the pot; not wanting the male I left him alone, and shortly after left the district for seven or eight months, on the lapse of which I returned, and while after Francolin again saw my old friend who, not having found another mate, was living quite alone; there was no question about his being unaccompanied, as I saw him every time I visited the spot. This is all the more remarkable, as Dik-diks were plentiful enough in the locality.

There is one point I should like to emphasise before proceeding to deal with each of the various species in turn, and that is the presence, in a large proportion of the Dik-diks, of small white spots on the muzzle.

Professor Lönnberg has given specific rank to a *Rhynchotragus* from Lake Baringo because of this peculiarity, but I venture to think that this feature will not be found to be constant. In specimens of *M. phillipsi* from the same district some will be seen to possess these white muzzle-spots, while in others they are absent.

MADOQUA PHILLIPSI Thos. (Pl. LV. fig. 3.)

Phillips' Dik-dik presents such striking variations in different localities that for some time past I have been endeavouring to get together a series of specimens which will show these variations clearly and enable me to decide as nearly as possible the limits of this interesting species.

In point of fact, were it not for the skull-measurements being so similar, I should have been tempted to give each of the varieties distinct specific rank, as the localities frequented by each are very clearly defined.

Phillips' Dik-dik was first described by Mr. Oldfield Thomas,

who took as the type a specimen obtained by Mr. Lort Phillips at Dobwein, 40 miles south of Berbera.

This spot I have been unable to locate, so can only conclude, after carefully examining the type specimen, that it was somewhere along the Golis foothills or, perhaps, just on the top of Mirso, which I will show is the southerly limit of the coast or Guban variety, to which I gave subspecific rank in July 1909* and called *M. phillipsi gubanensis*.

This subspecies is found all along the coast-belt of British Somaliland, passing northwards into French Somaliland, certainly as far north as Djibouti, but how much farther I have been unable to ascertain, and eastwards towards the Mijertain country, but how far I have not yet determined, owing to there being no specimens available from that area.

What I propose to designate as the true *M. phillipsi* is the brilliant rufous or dark cinnamon-flanked Dik dik found throughout the interior of British Somaliland from, roughly speaking, the Golis Range away to the south and west into the Haud, where, especially in the west, the animal's flanks are so red that at a short distance it looks rufous all over; this is in marked contrast with the coast variety, which looks quite grey.

As one passes through the hilly country from Jig-jigga to Harrar and also to the west and south-west of the former, one finds another and darker Dik-dik, which in its wild state looks of a dark red-brown colour. This is the Dik-dik to which Mr. Neumann gave the name *M. hararensis*, and so distinct does it appear in life from *M. phillipsi* that it fully deserves a name so that it might not be confounded with *M. phillipsi*; but in my opinion it deserves only subspecific rank, and should be called *M. phillipsi hararensis* (Pl. LV. fig. 2). It is to be expected that in localities where the soils are so distinct as in the coast-belt and the Haud one would see some variation in the coloration of the pelage, and here in this species we have this variation very distinctly marked; but this is not the only difference, another equally potent factor, in the shape of altitude with its accompanying variations in temperature, also assists in increasing the difference between the type species and its subspecies, by rendering the pelage thicker.

For instance, the hair in the Guban variety is scantier and shorter than in the Harrar and neighbourhood specimens; in the former the individual hairs from the dorsal region of the back measure from 13-23 mm., whereas in the latter variety they are usually 30 mm. or more. This difference renders *M. phillipsi gubanensis* a much more sleek-looking animal (Pl. LV. fig. 1). The pelage of the true *M. phillipsi*, which is the common Dik-dik found all over the interior of the "Horn of Africa," is intermediate between the two.

The skull-measurements in all three are, as one would expect, practically identical.

* Ann. & Mag. N. H. ser. 8, Vol. 4, p. 49.

This Dik-dik is known to the Somalis by the name "Gol ass," owing to its bright red flanks. It ranges from near Djibouti in the north and the Ennia Galla country in the west throughout the Somali country to the east coast and as far south as probably the 3rd parallel. A large number of the skins of this Dik-dik are brought down to the Benadir ports for sale, from Central and East Central Somaliland.

I might here add that I consider that little importance can be attached to the colour of the crest, as it is very variable. In some it is of a bright fulvous, in others of a dull reddish brown, while in not a few the hairs are tipped with black. The white eye-patch also varies in distinctness with age.

MADOQUA SWAYNEI Thos. (Pl. LVI. fig. 2.)

This is the smallest of the Somali Dik-diks, and is, according to Swayne, known to the Ogaden Somalis by the name "Guyu," but this name I have never heard it called myself. The word "Guyu" in Somali means any living animal.

There is very little known about the exact habitat of this little Dik-dik, owing to the fact that sportsmen have usually confounded it with the ubiquitous *M. phillipsi*. The type specimen was bought by Swayne from a native in the town of Berbera.

I have been on the look-out for it for some years, but have failed to come across it either alive or dead in British Somaliland. I first met it during my journey with the Anglo-Abyssinian Boundary Commission in 1908, south of Ginir on the river Web, one of the affluents of the Juba, where it was plentiful practically all along the left bank of this river up to its junction with the Ganale. This I took to be its westerly limit.

One of my collectors has lately brought me two specimens of a Dik-dik from Eastern Somaliland, as far south as Obbia on the coast; he obtained these from a place called Gharabwein about 12 miles inland from Obbia, where they were plentiful, and were the only Dik-diks seen, although at Eil Hur, not more than 10 miles distant, *M. phillipsi* abounded and this Dik-dik resembling *M. swaynei* was absent.

From the above I conclude that *M. swaynei* and the above-mentioned species which I am about to describe stretch right across Central Somaliland from east to west, where they are locally distributed, and surrounded by the commoner *M. phillipsi*. Neither *M. swaynei* nor the allied form go as far south as Mogadishu, as my collector was unable to procure a specimen of either species there or on the Webi Shebeleh, nor was he able to purchase any of their skins in the market, although the Somalis bring Dik-dik skins in thousands for sale in the coast towns in Italian Somaliland. The only two species the skins of which he was able to obtain were *M. phillipsi* and *R. guentheri*.

The Obbia specimens differ from those I obtained on the Web in Western Somaliland in that there is no yellow suffusion of the

grizzling on the back in the former, as there is in the latter, and the bright rufous nose-patch is not continuous with the crest, which may be either rufous or dull earthy brown.

In his 'Game Animals of Africa,' page 191, Mr. Lydekker says, speaking of *M. swaynei*, "The bucks weigh but 6 lbs. and the does even less." Now it is an invariable rule among these small antelopes to find the females heavier than the males. There is usually a difference of 1 lb. between the sexes. Adult males of Swayne's Dik-dik weigh about $4\frac{1}{2}$ lbs. and the females 5 or $5\frac{1}{2}$ lbs., whereas the average weight of a buck of *M. phillipsi* is $5\frac{1}{2}$ lbs. and of a doe $6\frac{1}{2}$ lbs. The heaviest buck of the latter species I have ever weighed was $6\frac{3}{4}$ lbs., whereas the heaviest doe was 8 lbs.

I should place the range of this Dik-dik between the 5th and 9th parallels of latitude, where, although it intermingles with *M. phillipsi*, it is not nearly so common. It is quite possible that it is not to be found farther north than the 8th parallel, as Mr. Dodds, a friend of mine, shot a large number of Dik-diks in the Ogaden Rer Ali country, especially around Daggahbur and Milmil, and failed to procure a single specimen of *M. swaynei*, although both *M. phillipsi* and *R. guentheri* were obtained.

MADOQUA PIACENTINII, sp. n. (Pl. LV1. fig. 1.)

Although this little Dik-dik agrees, as regards its size and skull-measurements, with *M. swaynei*, it differs so markedly in coloration that I have considered it advisable to propose a new name for it.

In *M. swaynei* the grizzling is very indistinct, being invariably suffused with a dull buff or clay colour, whereas in this species the grey grizzling is so fine and distinct that it at once attracts attention.

The coloration of the legs in both species is similar. The neck in *M. piacentinii* is fairly grizzled all round, the pale throat and buff chin patches being completely cut off from the pinkish buff of the chest. Apart from the fine grey grizzling, the most distinctive patches are about the head.

In *M. piacentinii* there is a bright rufous diamond-shaped nose-patch which stands out conspicuously on the grizzled head, while the terminal part of the long hairs of the crest in both my specimens is of a dull creamy buff. The hairs of the crest, however, vary so much in Dik-diks that little importance can be attached to this feature. The ears, which are of a dark buff, have a very distinct black edging on the outside, about 4 mm. in width anteriorly and dwindling down to a mere edging posteriorly. This peculiarity I have never seen in any of the other Somali Dik-diks.

I was successful in getting only two specimens of this very handsome Dik-dik, both males, but both present exactly similar features. They were obtained by one of my collectors at a place

called Gharabwein, within a day's march of Obbia in the Mijertain country, Italian Somaliland. They were inhabiting thick aloe scrub country, and were plentiful in a locality some little distance from water; they were very local and appeared to be surrounded by *M. phillipsi*.

The following are the measurements in the flesh of the type specimen—a male in the British Museum, No. 356.

Head and body	475 mm.
Tail	37 "
Hind foot	137 "
Ear	62 "
Weight	4½ lbs.

Skull-measurements.

Total length	92 mm.
Basal length	80 "
Posterior edge of orbit to gnathion	65 "
Upper cheek-teeth.....	32 "
Length of nasals.....	16 "
Breadth of nasals	8.5 "

In comparing the above skull-measurements with a typical *M. swaynei*, it will be found that they are practically identical.

This bright and beautiful Dik-dik I propose to name in honour of my friend Mr. Piacentini, the Acting Consul-General for Italy in Aden, through whose kindness and help I was able to send my collector to the Mijertain country.

RHYNCHOTRAGUS GUENTHERI Thos.

This Dik-dik, known to the Ogaden Somalis by the name "Ghussleh" or "Gussuleh," owing to its habit, when startled, of dashing off in leaps and bounds, giving vent to a peculiar whistling cry which sounds like "Ghuss-Ghuss-Ghuss," is chiefly found in Western and West Central Somaliland. Swayne tells us that he first met with it when travelling in a south-westerly direction in the Rer Amaden country, *i. e.*, roughly speaking, between the 7th and 8th parallels of north latitude; this is its northerly limit, as Mr. J. H. Dodds tells me that during a recent journey he made in Western Somaliland he never met this Dik-dik until he got to Daggahbur, a well-known Ogaden watering-place near Mihnil.

Starting from Daggahbur in the north this Dik-dik passes in a southerly and south-westerly direction for Dolo at the junction of the Dawa and Ganale rivers, and then crossing the Juba is ubiquitous throughout north-eastern British East Africa. I do not think it reaches the coast anywhere, being there replaced by *R. kirkee*. In Somaliland proper its easterly and south-easterly limits are still unknown.

It probably extends for a considerable way down the Webi

Shebeleh river, very nearly reaching to the coast in the Hawiya country, as thousands of their skins are yearly sold in the market in Mogadishu by the Hawiya Somalis. They are either caught in native traps or shot with bow and arrow.

RHYNCHOTRAGUS KIRKII Günth.

Kirk's Dik-dik, which was named so far back as 1880, inhabits only the most southern angle of the Somali country east of the Juba River; it, however, extends across that river and southwards into British East Africa as far as Kilimanjaro. How far north it extends into Somaliland proper I am unable to say, as the material at present available is insufficient.

The type specimen came from Brava on the Benadir coast of Italian Somaliland, but my collector failed to get me any specimens from Mogadishu, so I conclude that it does not extend farther north than this, being replaced on the coast by *M. phillipsi* and in Central Somaliland by *R. guentheri*, of which hundreds of skins are offered for sale in the market in Mogadishu. I have only been able so far to procure the skins without head-skins or skulls from that locality, so am unable to definitely state whether the skins belong to *R. guentheri* or an allied form; they certainly appear to agree with my specimens of the former.

RHYNCHOTRAGUS CORDEAUXI Dr.-Br.

This Dik-dik, which was named by me last year, should really be included among the Abyssinian Dik-diks, together with *R. erlangeri*, *M. phillipsi hararensis*, and *R. guentheri wroughtoni*, but like *M. phillipsi hararensis*, it will probably be found to inhabit the north-eastern part of the Esa country.

It was first obtained by me in the bush country to the west and north-west of Dirre Dawa, and is at present, so far as I am aware, recorded only from the Danakil country:

I traced it as far west as the Gurgurra River, one of the tributaries of the Hawash, and it is this latter river that marks out its westerly limit; the northern edge of the Harrar and Arussi plateaux mark its southern limits, but how far north and north-east it strays I am at present unable to definitely state.

This is a fine species, and most resembles in appearance *M. phillipsi gubanensis*, only it is a much bigger animal.

RHYNCHOTRAGUS ERLANGERI Neum.

Erlanger's Dik-dik hails from Eastern Abyssinia. As one descends from the great Arussi plateau on the low-lying country, towards the east, called by the Gallas "Gamogi," this is the Dik-dik one finds.

If a line be drawn on the map between Harrar in the north and Ginir in the south, this line will cut through an acacia-bush

country, more or less intersected by rivers and streams which drain the great Arussi plateau; this, the Ennia Galla country, is where Erlanger's Dik-dik is found.

The type specimen was obtained at Sheikh Hussein, which is 30 or 40 miles or so east of the edge of the plateau, while my own specimen was obtained some 20 miles to the west of Sheikh Hussein opposite the foothills of Mt. Abu el Kassim, on the south bank of the river Wabi.

So far as I am aware, these are the only two specimens recorded, so that at present its limits must remain undefined; but I fancy I shall be fairly accurate in suggesting that its habitat probably lies to the west of the Harrar-Ginir line, being replaced to the east of it by *M. phillipsi hararensis* and to the south by *M. swaynei*.

RHYNCHOTRAGUS GUENTHERI WROUGHTONI Df.-Br.

I have now come to a very interesting subspecies, namely *R. guentheri wroughtoni*. The only specimen recorded is the type, which I obtained on the north bank of the Wabi River among the foothills of Mt. Abu el Kassim.

The presence of this subspecies in a spot so far removed from the natural habitat of the species can only be explained by its having at some period or other found its way up the river Wabi, which is one of the main tributaries of the Webi Shebeleh, which flows through the vast area inhabited by *R. guentheri*. Its darker coloration and large ears are probably accounted for by its environment, namely the dense acacia bush on the banks of the river; the size and shape of its ears certainly point to this.

I am inclined to think that this subspecies will only be found close to the river, as both *M. erlangeri* and *R. swaynei* are to be found within a short distance of it.

EXPLANATION OF THE PLATES.

PLATE LV.

Fig. 1. *Madoqua phillipsi gubanensis*. | Fig. 2. *M. phillipsi hararensis*.

Fig. 3. *Madoqua phillipsi*.

PLATE LVI.

Fig. 1. *Madoqua piacentinii*. | Fig. 2. *Madoqua swaynei*.
